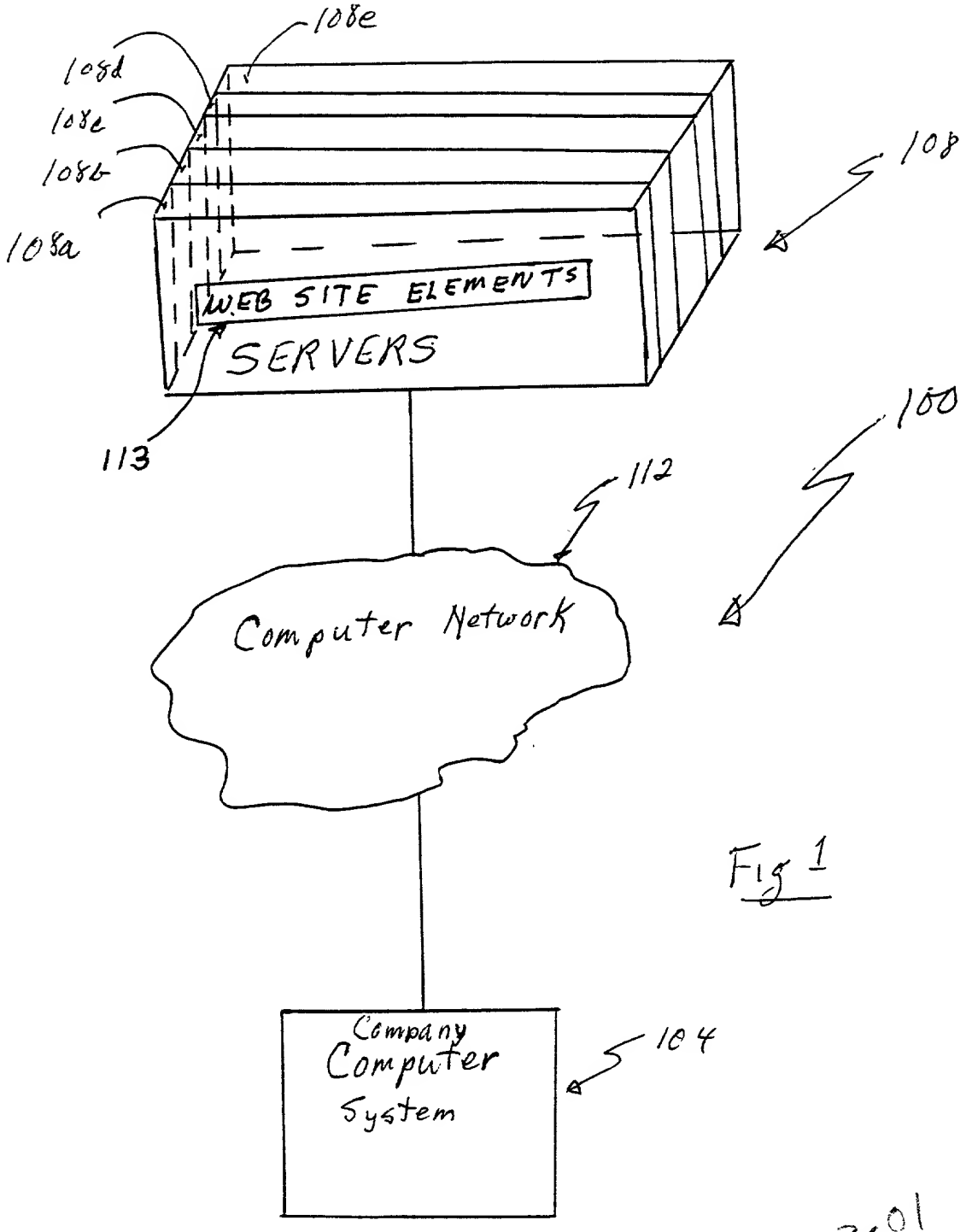


Fig 1

07593-01

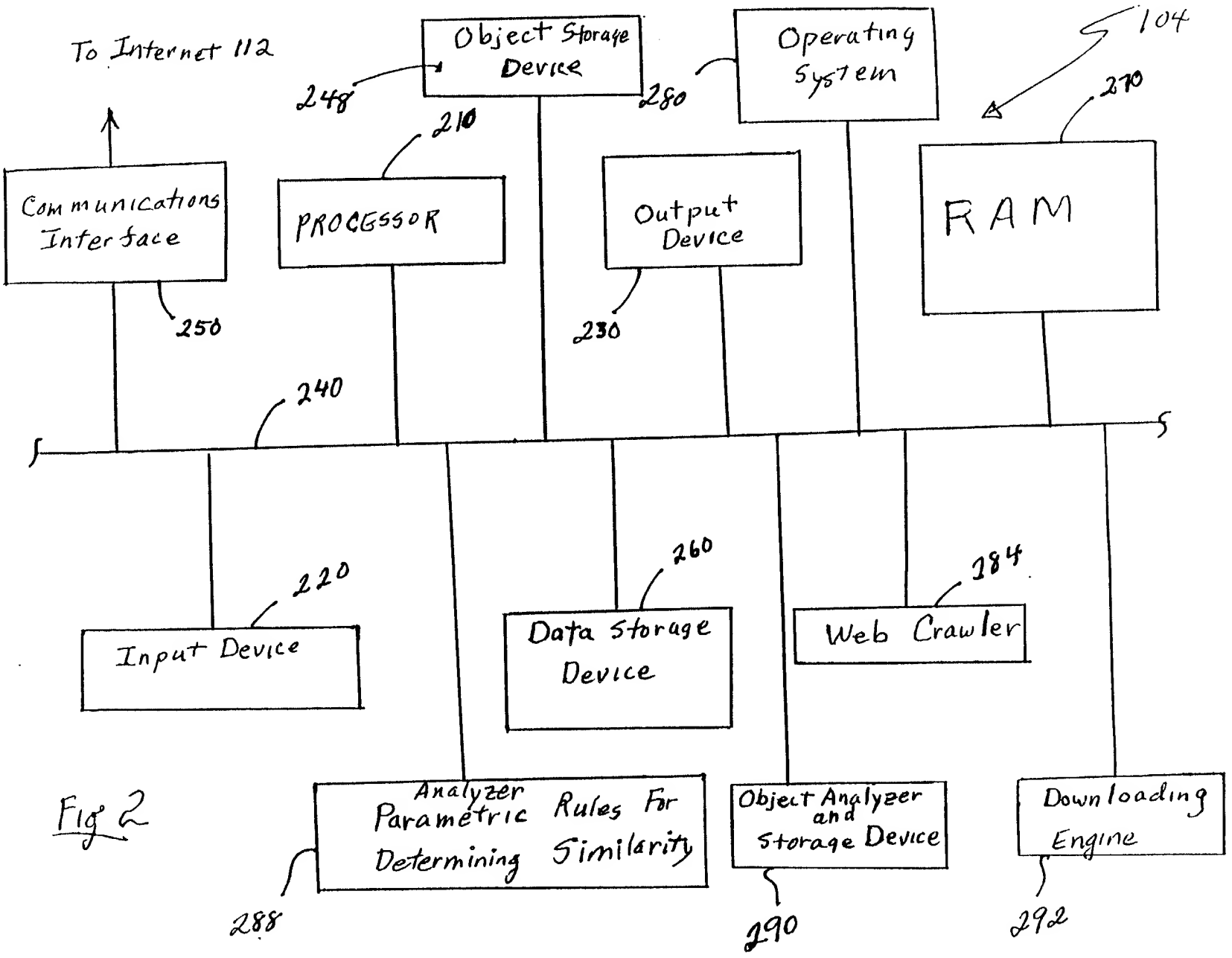

To Internet 112
Object Storage Device
248
Operating System
280
104
270
210
Communications Interface
PROCESSOR
Output Device
RAM
250
230
240
220
260
184
Input Device
Data Storage Device
Web Crawler
Analyzer Parametric Rules For Determining Similarity
Object Analyzer and Storage Device
Downloading Engine
288
290
292

Fig 2

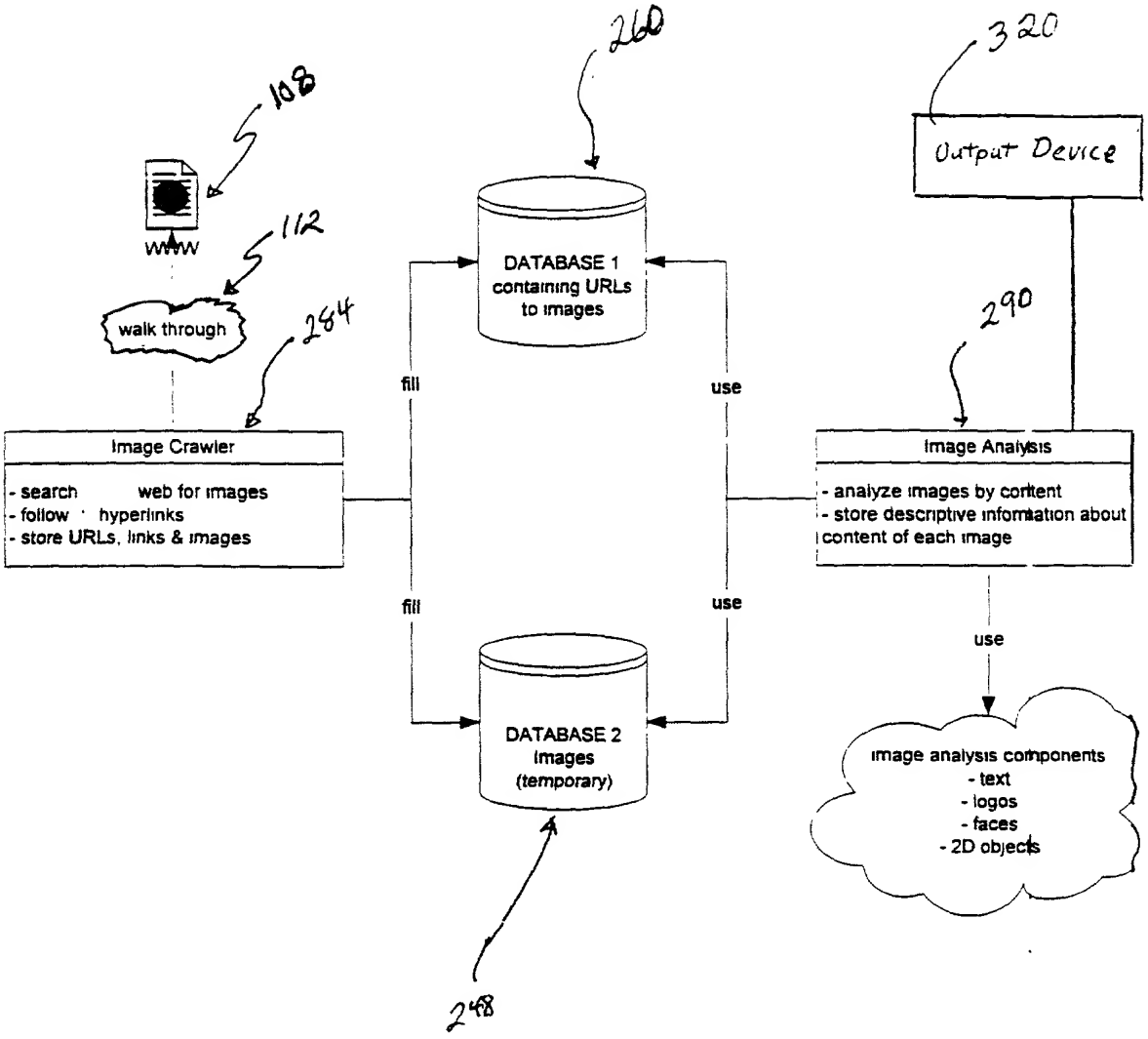

108
112
WWW
walk through
284
260
DATABASE 1
containing URLs
to images
320
Output Device
290
Image Crawler
- search web for images
- follow hyperlinks
- store URLs, links & images
fill
use
Image Analysis
- analyze images by content
- store descriptive information about
content of each image
fill
use
use
DATABASE 2
Images
(temporary)
image analysis components
- text
- logos
- faces
- 2D objects
248

Fig 3A

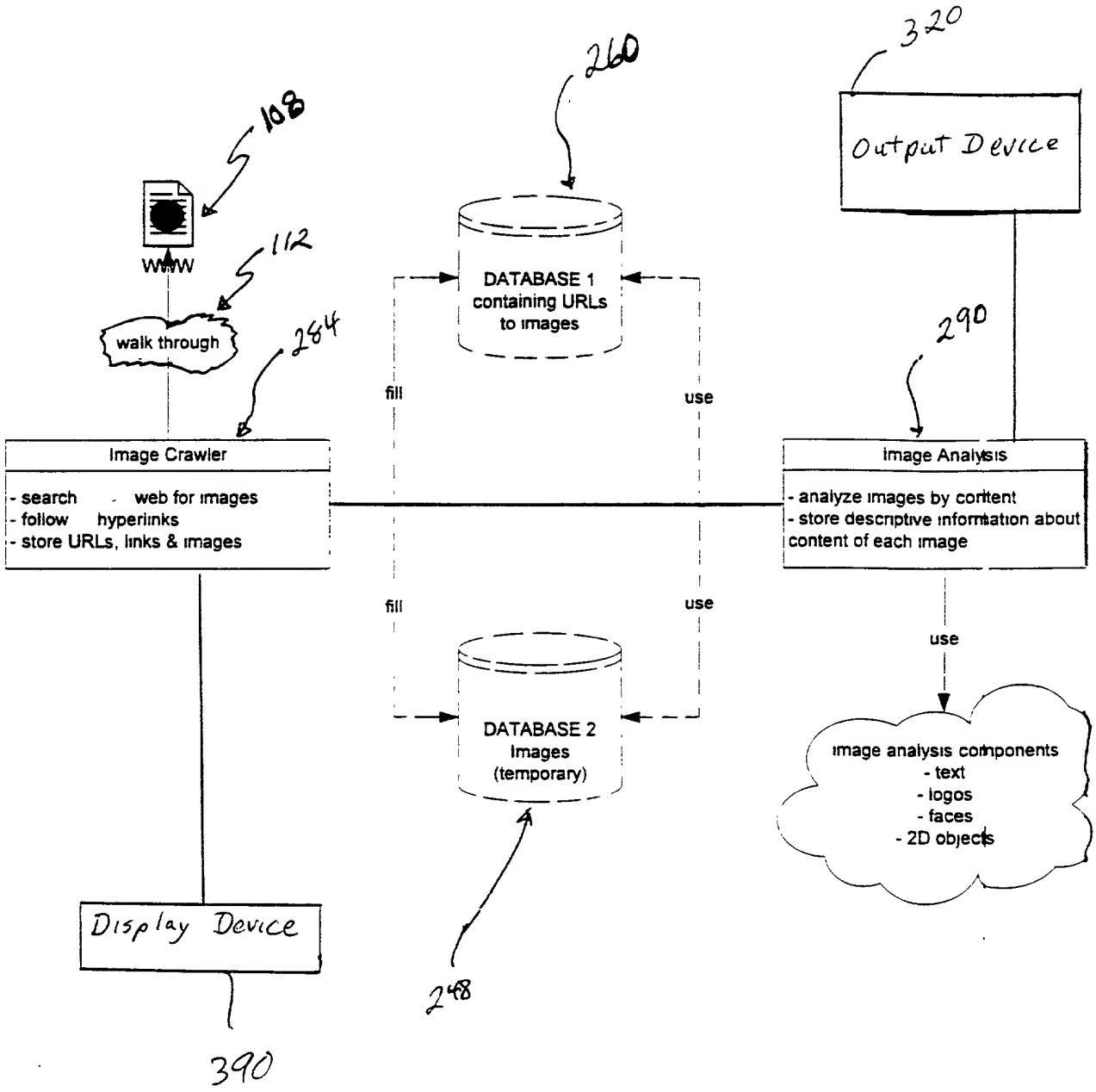

108
WWW
112
walk through
284
Image Crawler
- search web for images
- follow hyperlinks
- store URLs, links & images
260
DATABASE 1
containing URLs
to images
fill
use
fill
use
DATABASE 2
Images
(temporary)
248
320
Output Device
290
Image Analysis
- analyze images by content
- store descriptive information about content of each image
use
image analysis components
- text
- logos
- faces
- 2D objects
Display Device
390

Fig 3B

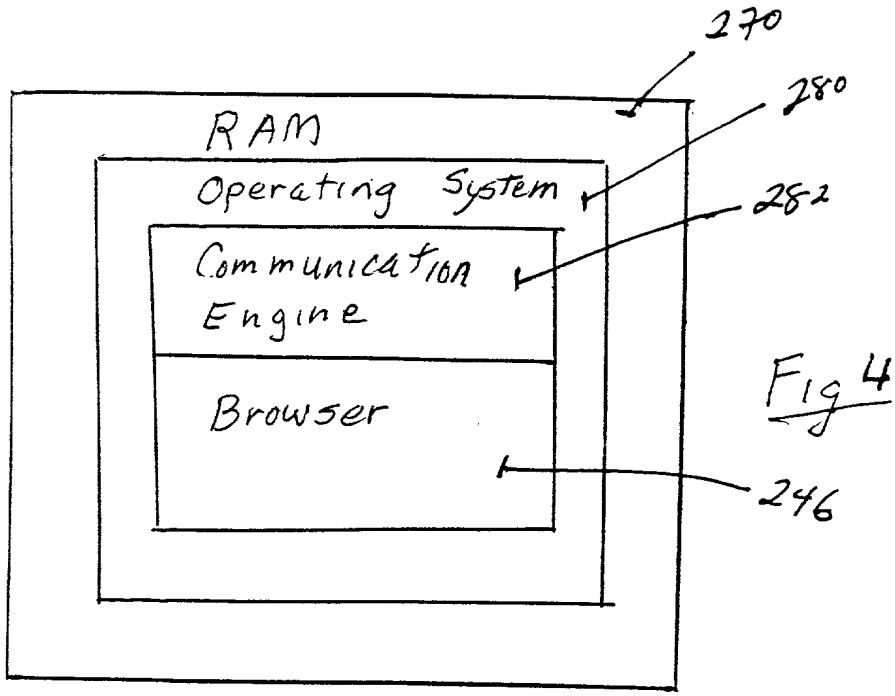

270
280
RAM
Operating System
282
Communication Engine
Browser
246

Fig 4

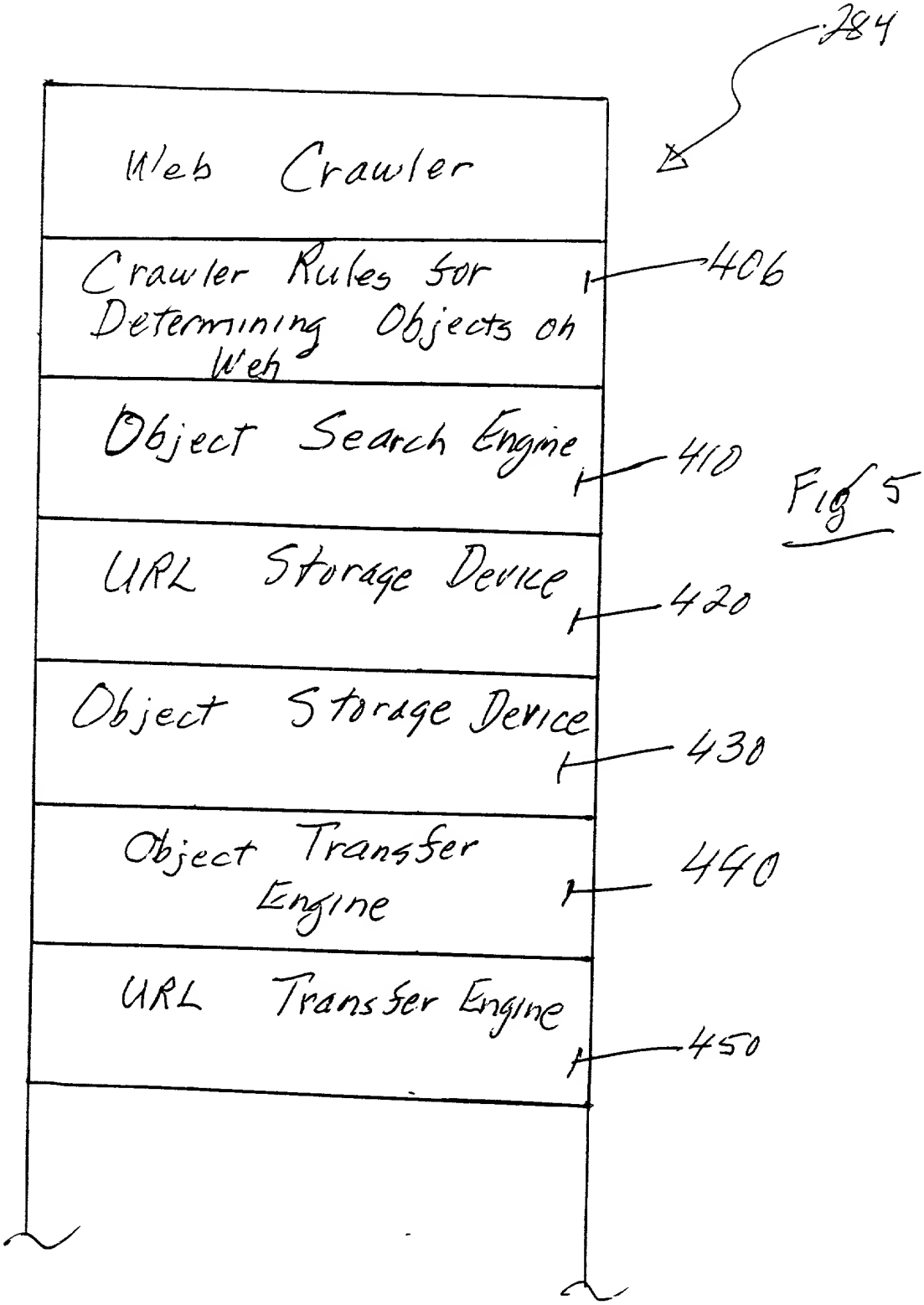

284
Web Crawler
Crawler Rules for Determining Objects on Web
406
Object Search Engine
410
URL Storage Device
420
Object Storage Device
430
Object Transfer Engine
440
URL Transfer Engine
450

Fig 5

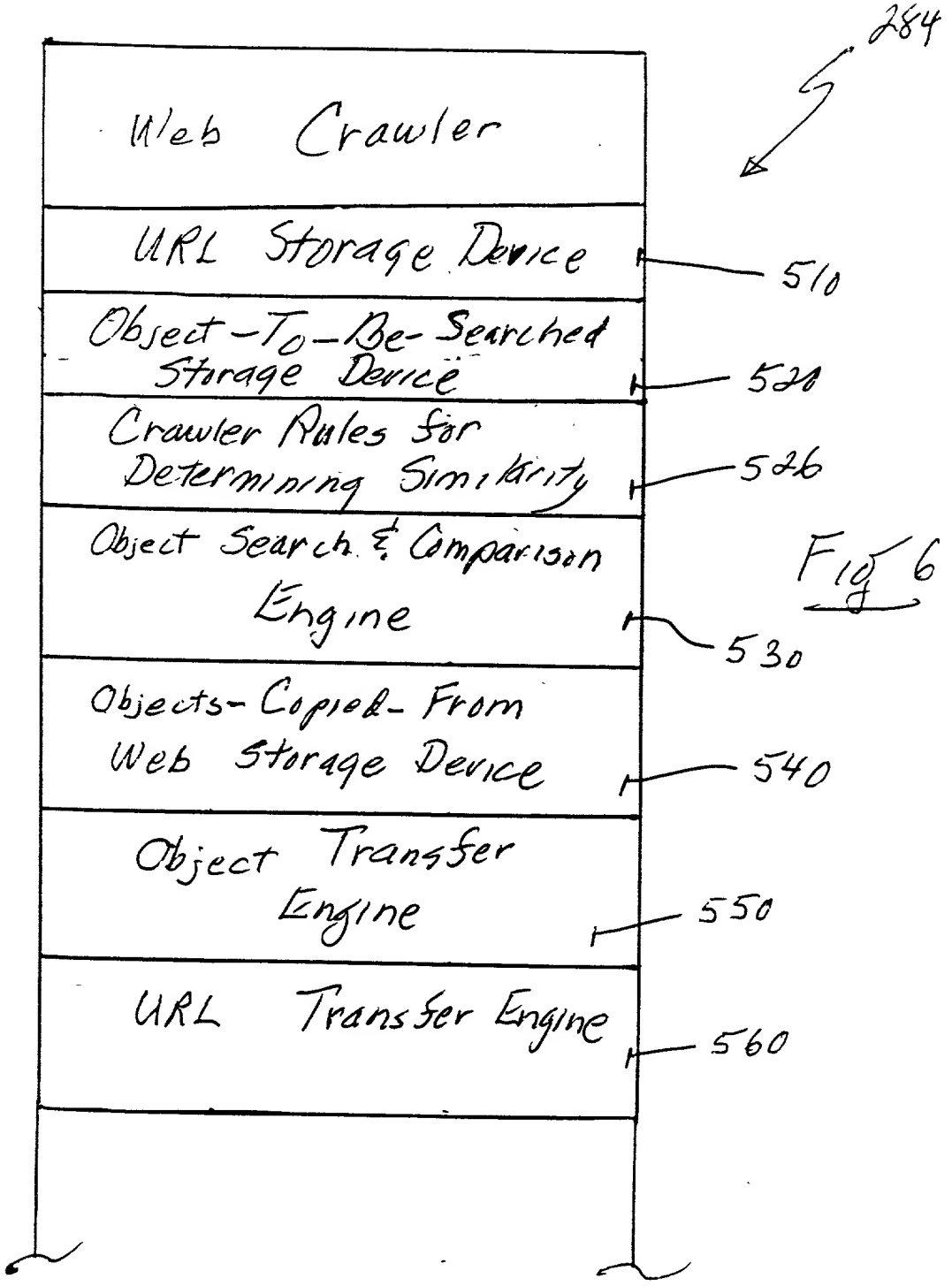

284
Web Crawler
URL Storage Device
510
Object-To-Be-Searched Storage Device
520
Crawler Rules for Determining Similarity
526
Object Search & Comparison Engine
530
Objects-Copied-From Web Storage Device
540
Object Transfer Engine
550
URL Transfer Engine
560

Fig 6

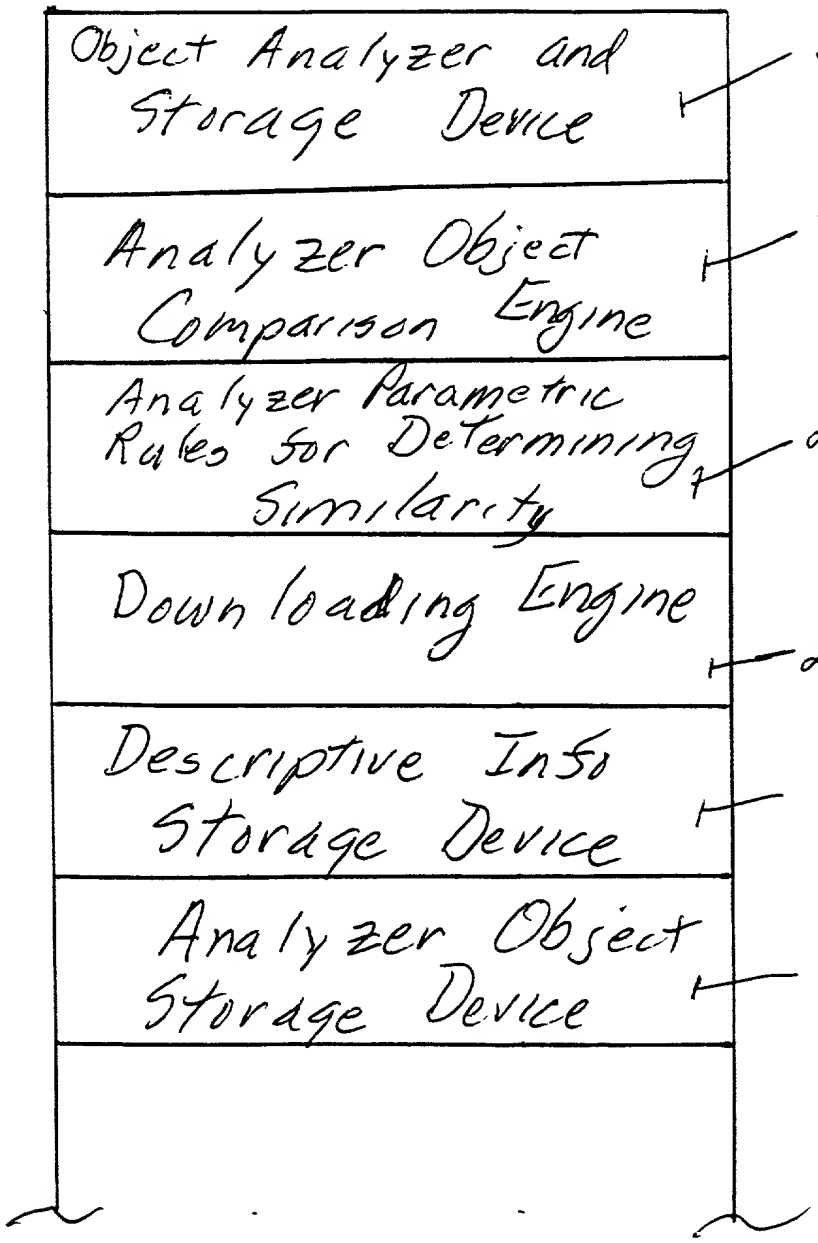

Object Analyzer and Storage Device
290
Analyzer Object Comparison Engine
730
Analyzer Parametric Rules for Determining Similarity
288
Downloading Engine
292
Descriptive Info Storage Device
710
Analyzer Object Storage Device
720

Fig 7

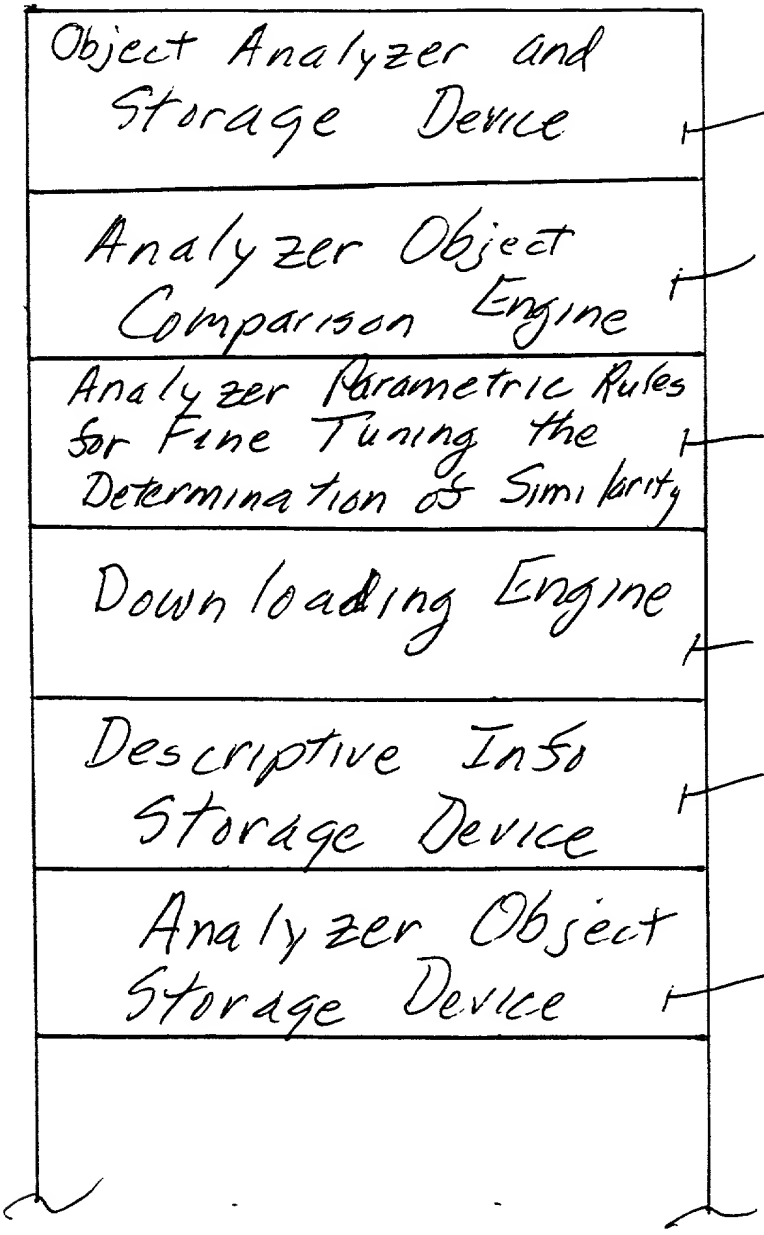

Object Analyzer and Storage Device
290
Analyzer Object Comparison Engine
830
Analyzer Parametric Rules for Fine Tuning the Determination of Similarity
840
Down loading Engine
292
Descriptive Info Storage Device
710
Analyzer Object Storage Device
820

Fig 8

Web Crawler (walk through 112)

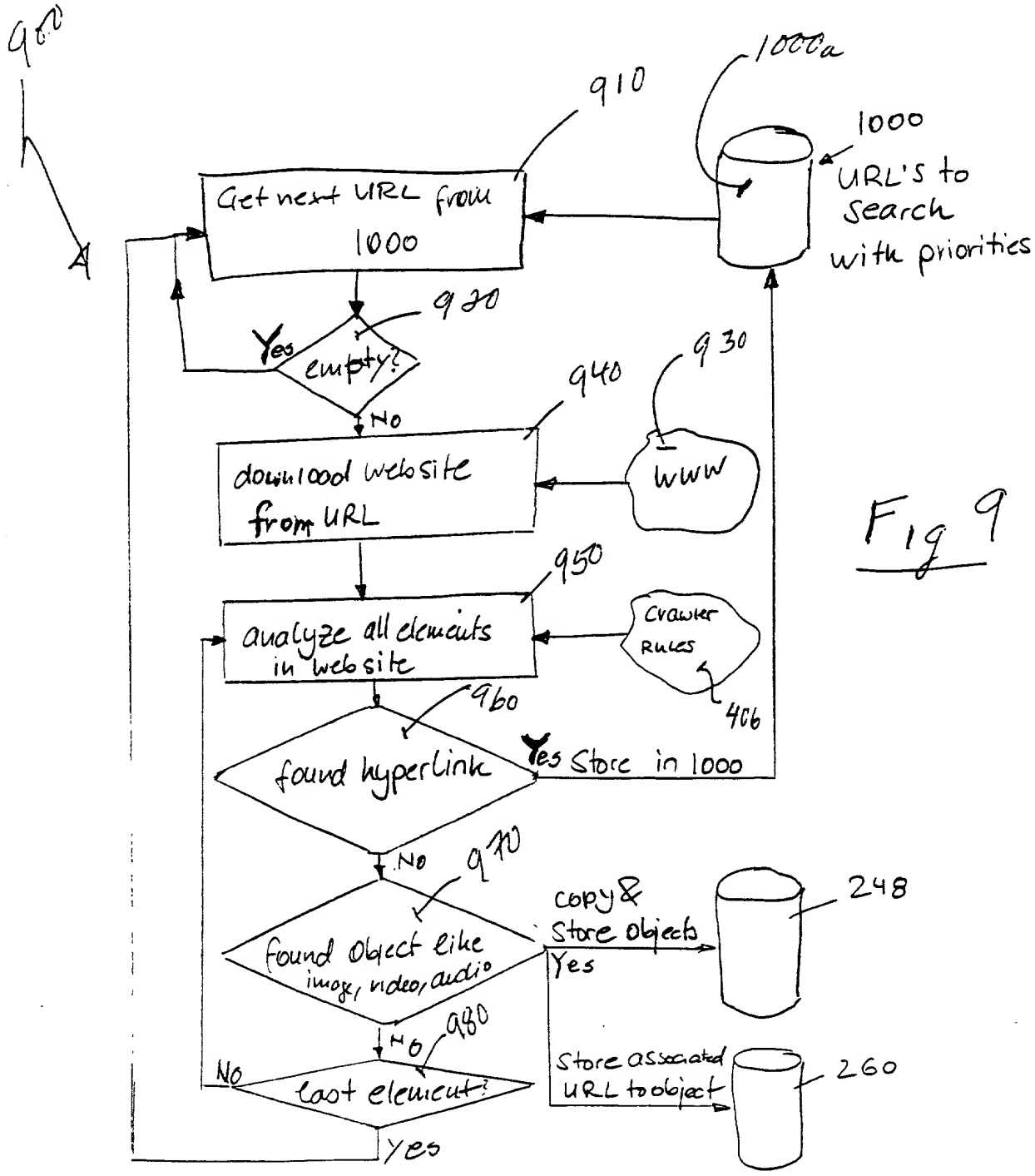


Fig 9

Object Analysis Process 1007

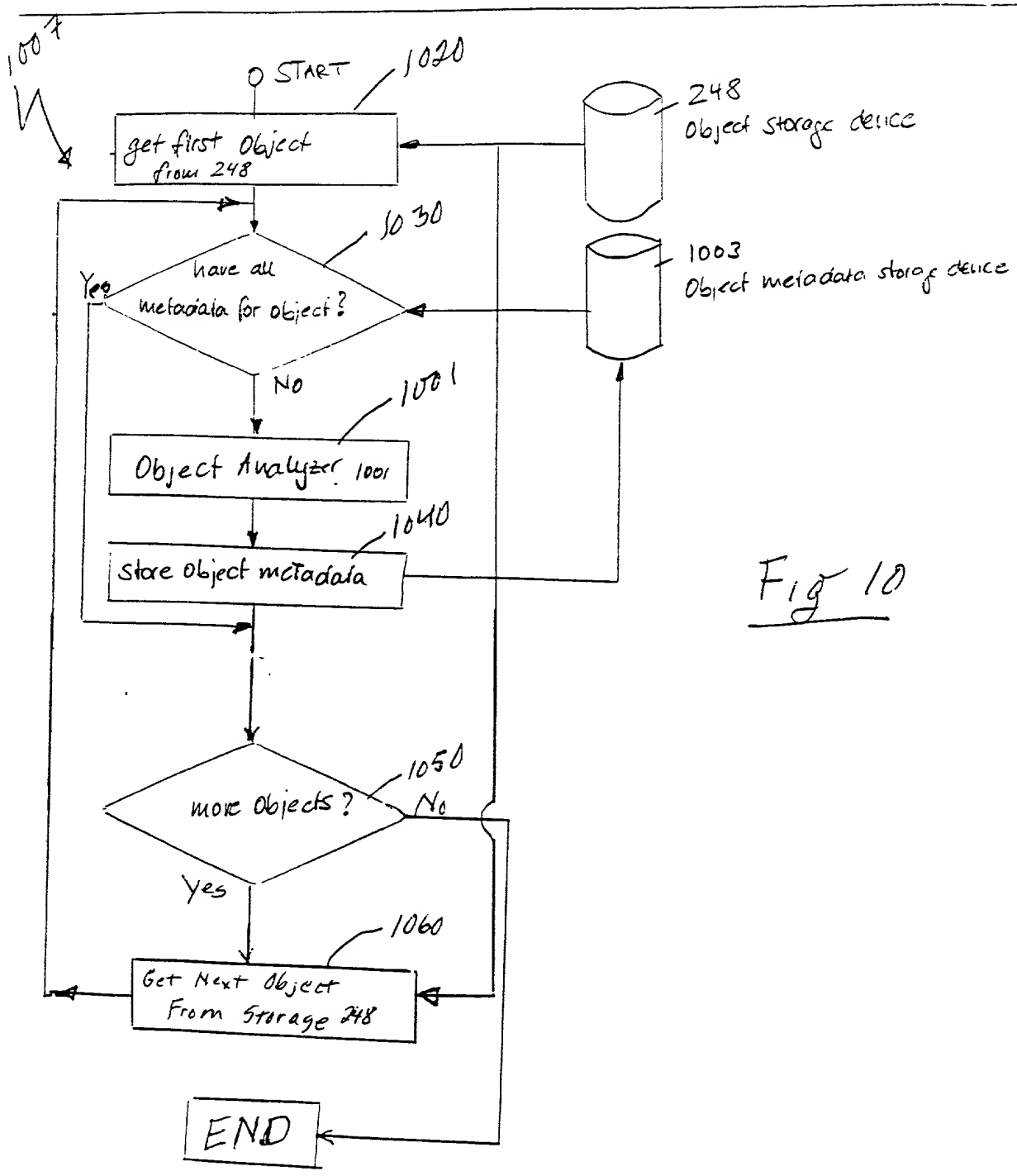


Fig 10

Object Analyzer 1001

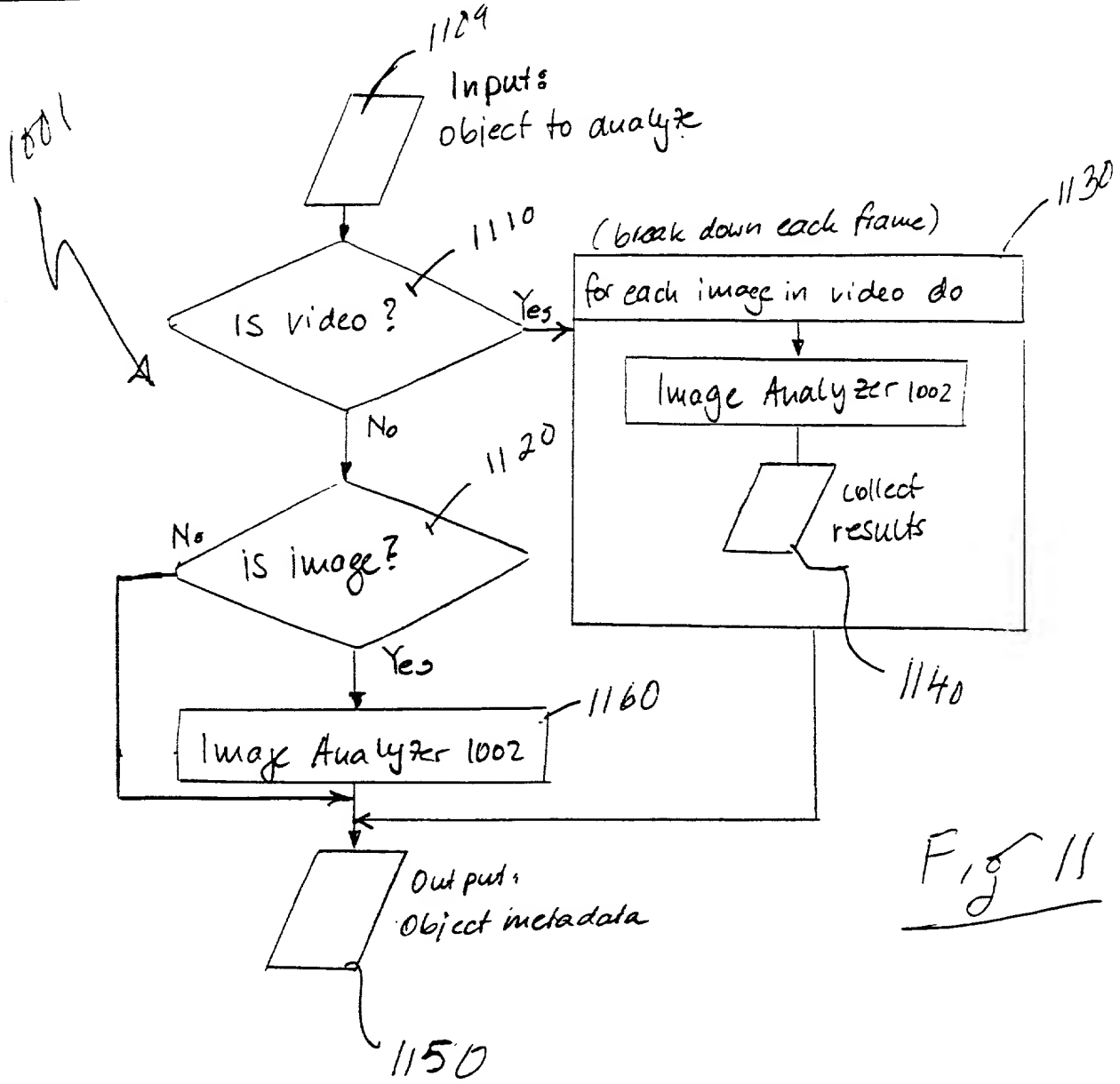


Fig 11

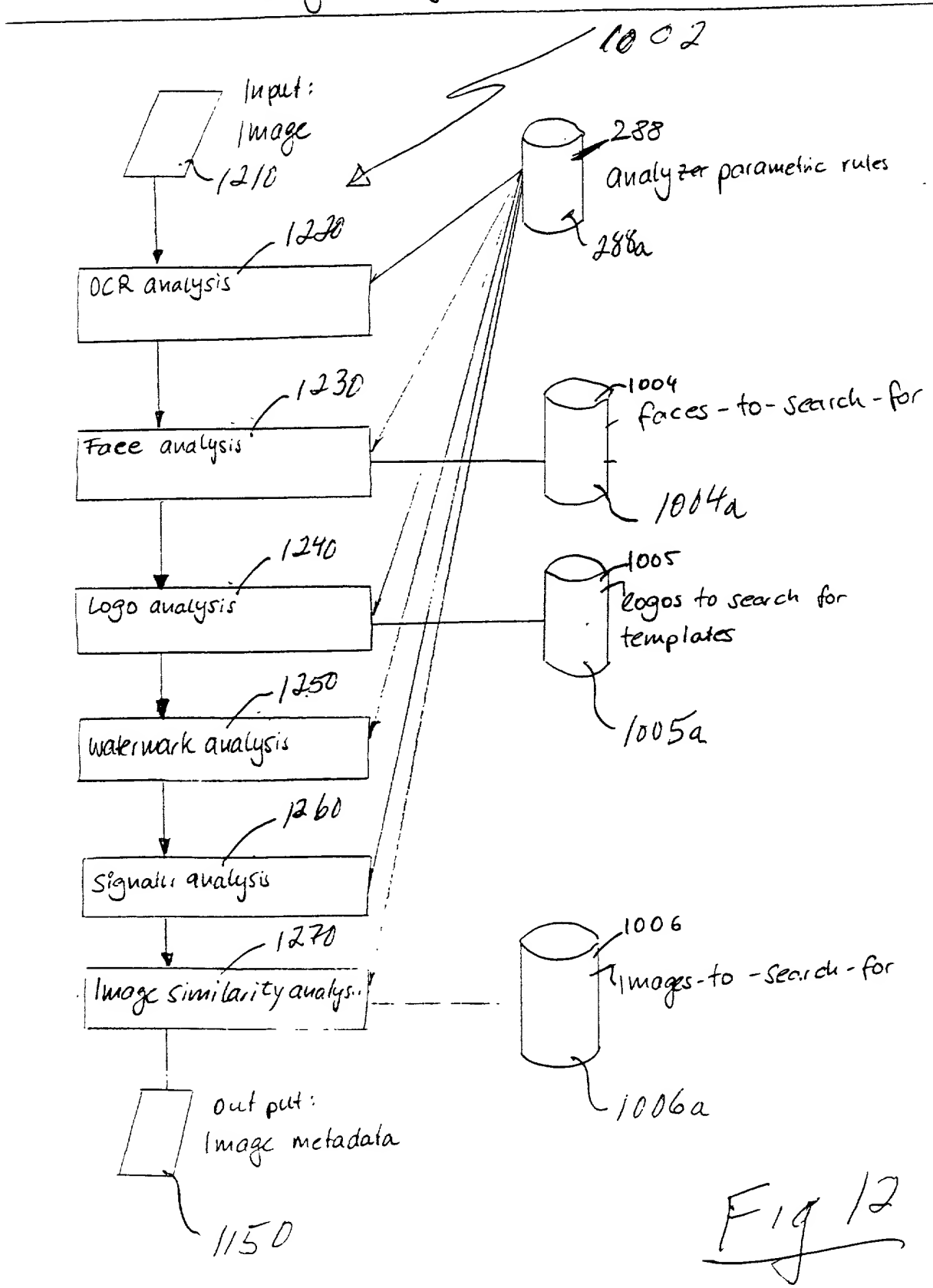


Image Analyzer 1002
1002
Input: Image
1210
288
analyzer parametric rules
288a
1220
OCR analysis
1230
Face analysis
1004
faces-to-search-for
1004a
1240
Logo analysis
1005
logos to search for templates
1005a
1250
watermark analysis
1260
Signature analysis
1270
Image similarity analysis
1006
images-to-search-for
1006a
output: Image metadata
1150

Fig 12

Logo Search (offline)

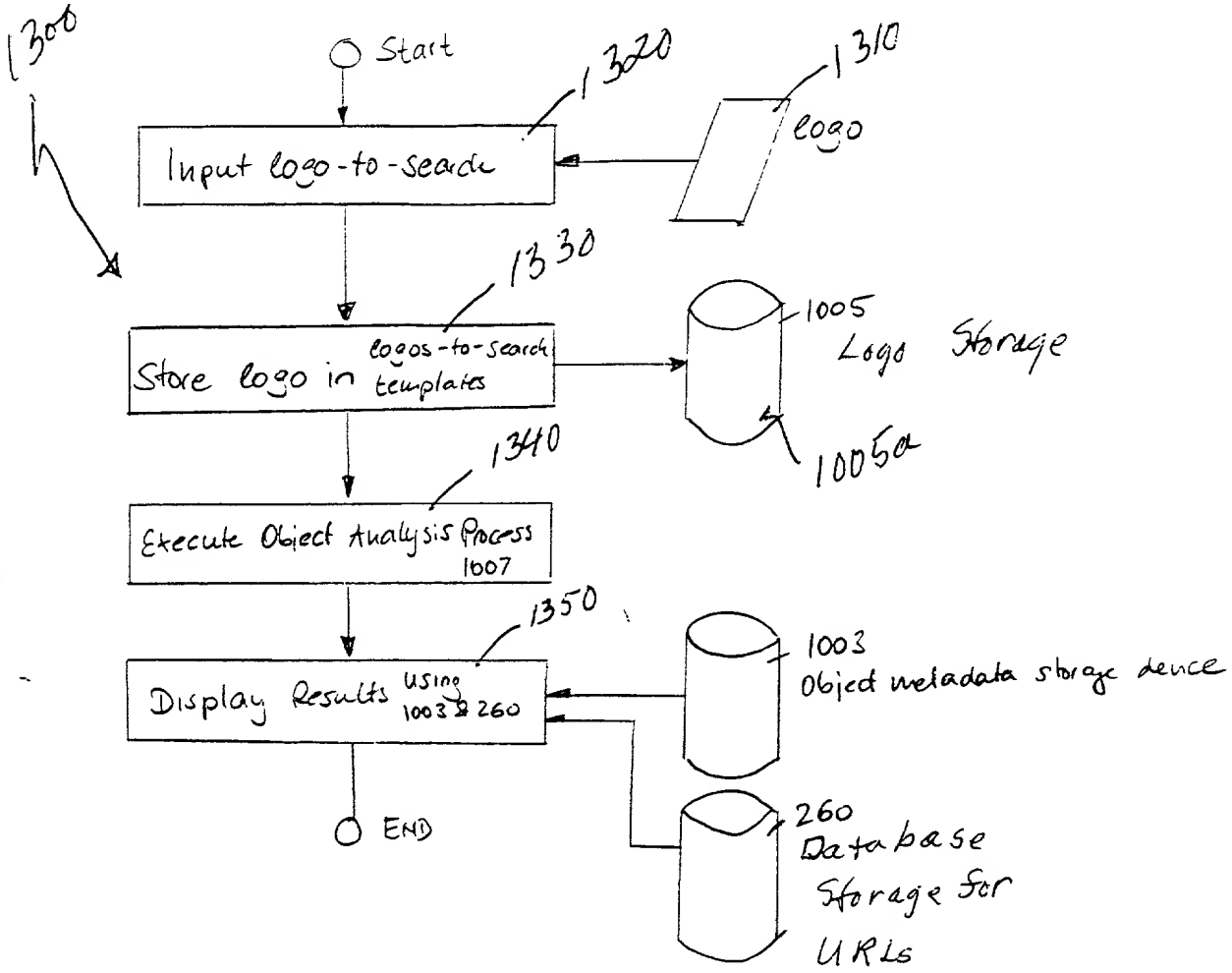


Fig 13

Web Crawler with Object analysis 1008

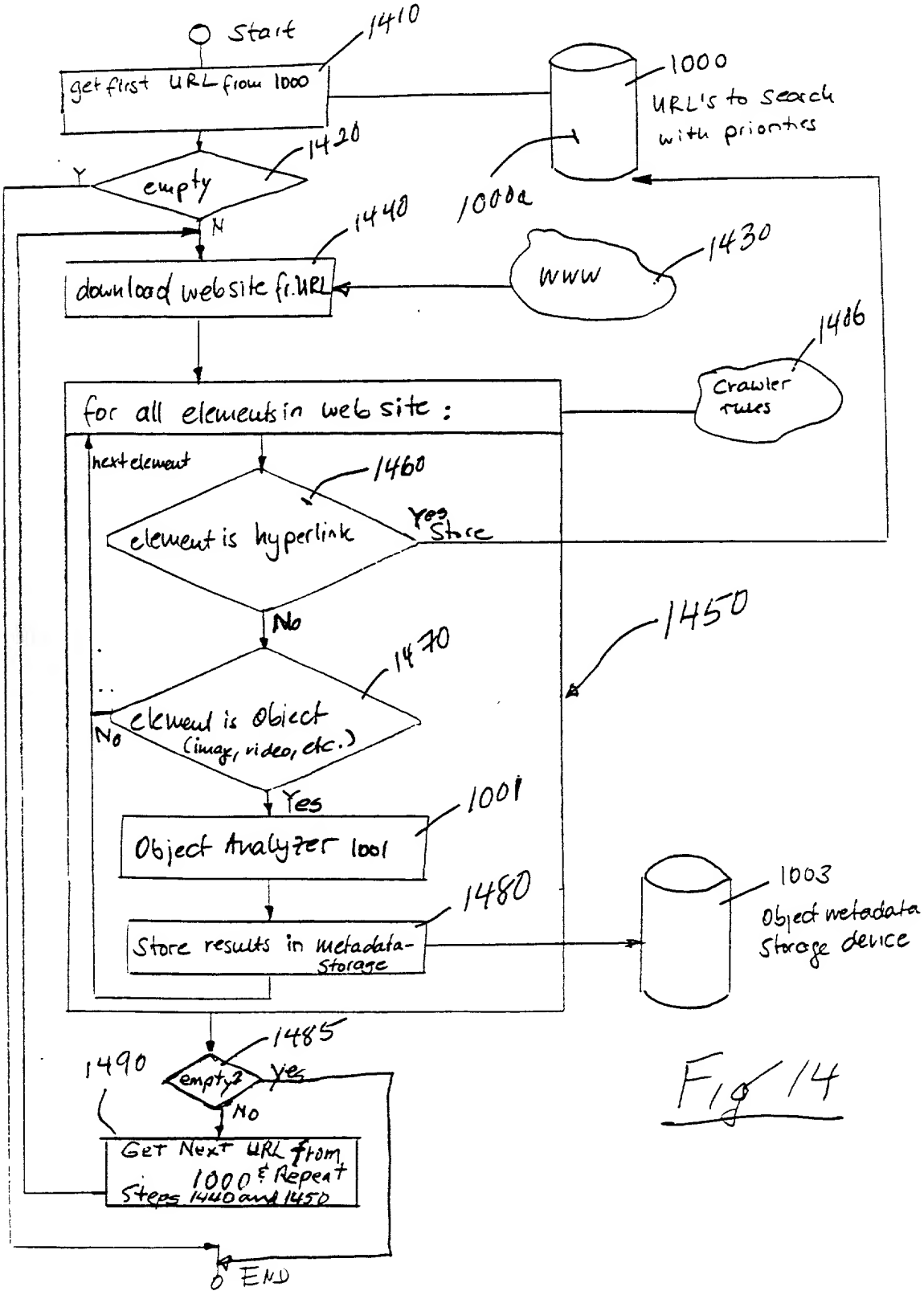


Fig 14

Adding URLs on demand

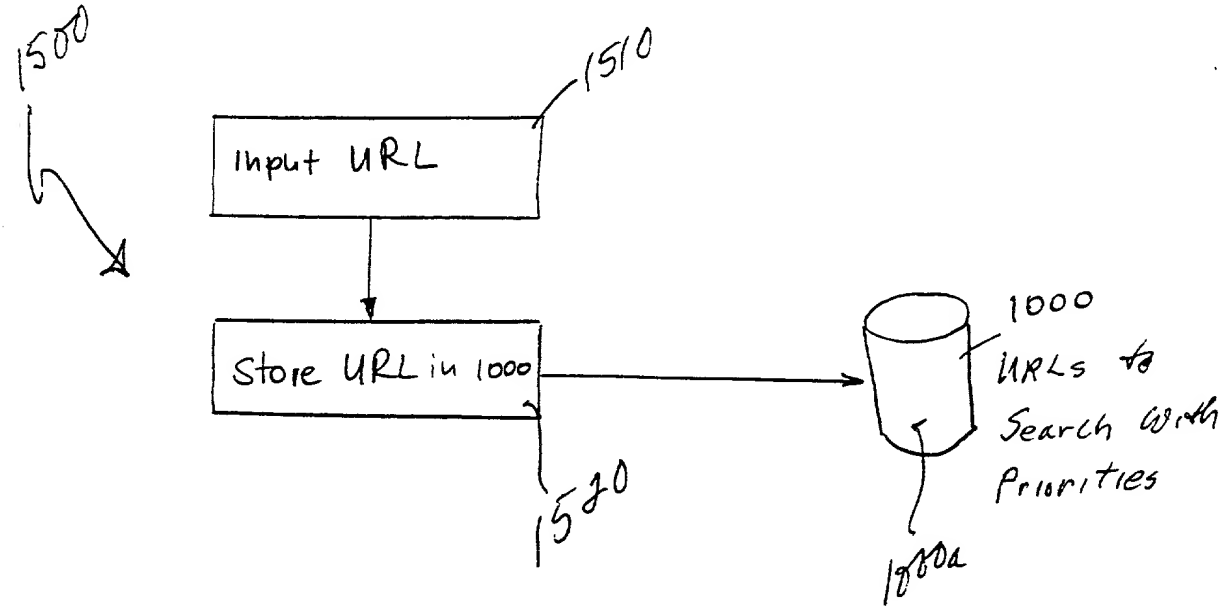


Fig 15

Logo Search (online)

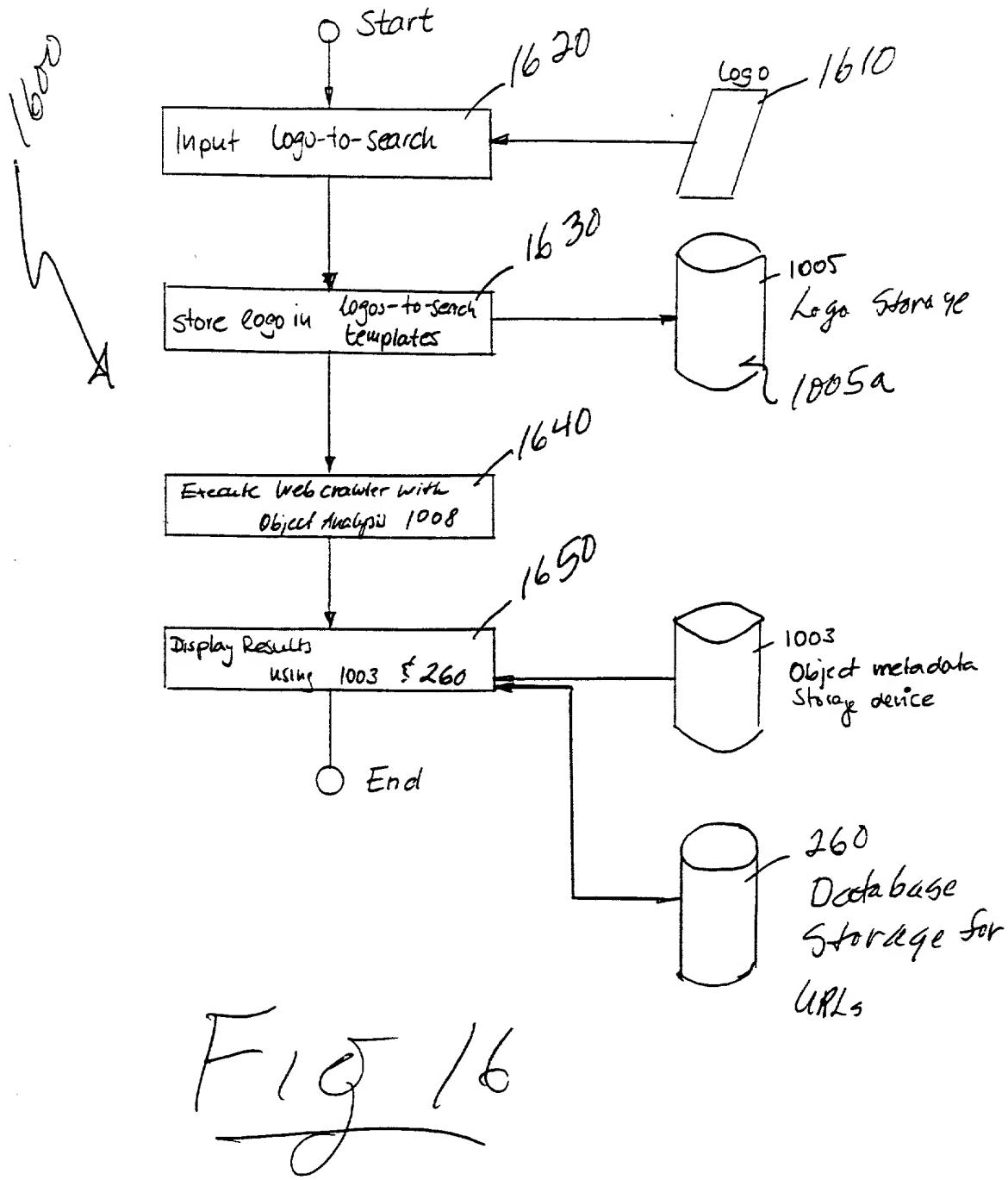
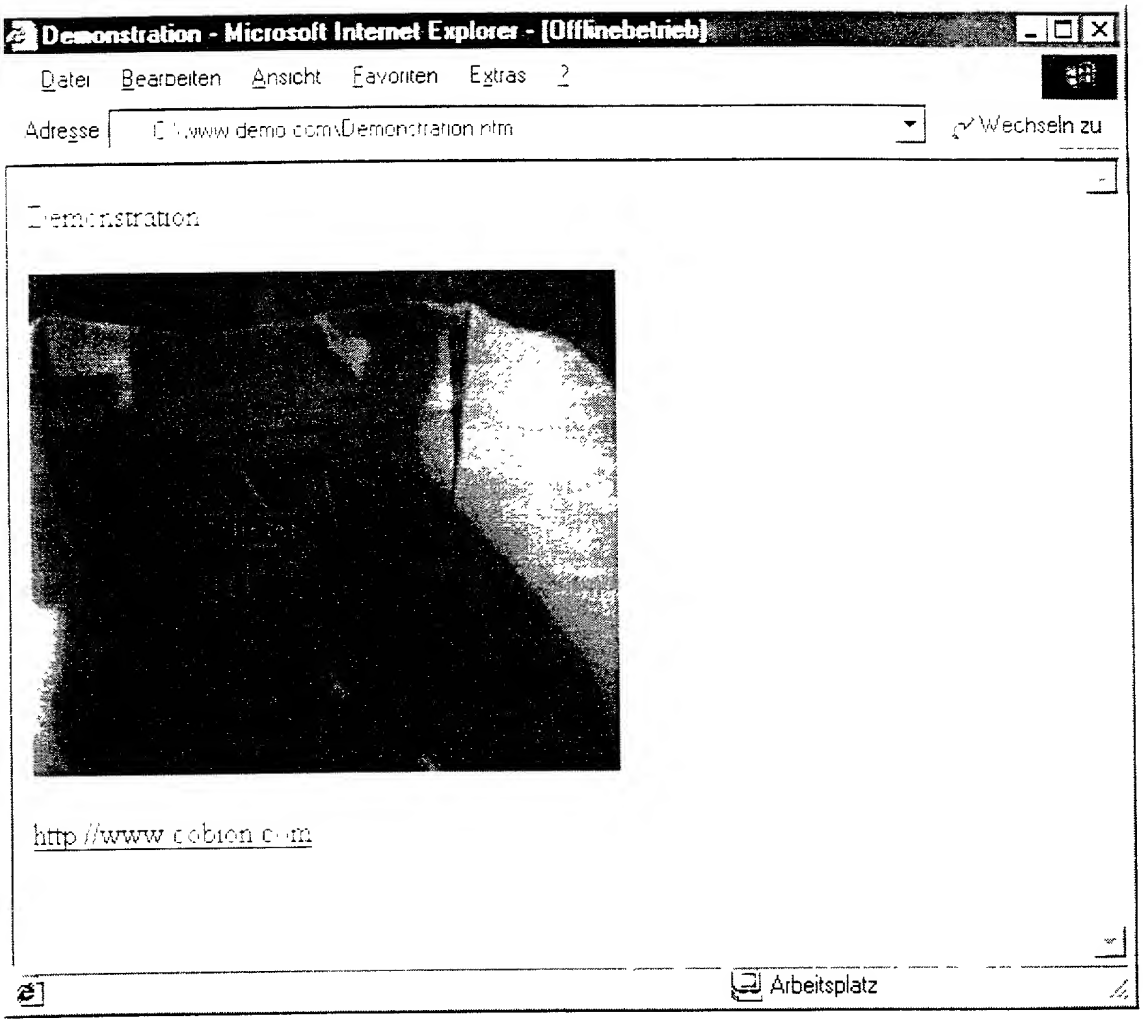


Fig 16

HTML page



tshirt.jpg (id=970729)

Fig 17

Logo to search for (id = 10001)

Fig 18